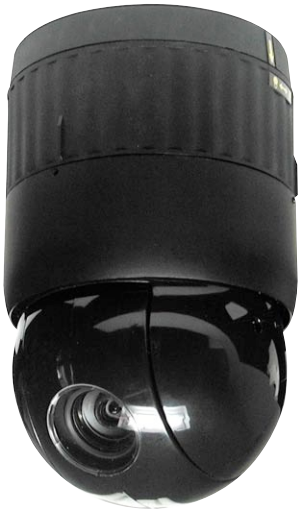
Installation and Operating Manual

Fastrax III

1/4” Day/Night High Speed Dome Camera
EDC-3182, EDC-3262, EDC-3351, EDC-3362



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⇒ www.videor.com

Safety Instructions / Maintenance

- Read these safety instructions and the operation manual first before you install and commission the camera.
- Keep the manual in a safe place for later reference.
- Protect your camera from contamination with water and humidity to prevent it from permanent damage.
  Never switch the camera on when it gets wet. Have it checked at an authorized service center in this case.
- The unit should be protected against excessive heat, dust and vibration.
- Never operate the camera outside of the specifications as this may prevent the camera functioning.
- Do not operate the cameras beyond their specified temperature, humidity or power ratings.
- Operate the camera only at a temperature range of 0°C to +50°C and at a humidity of max. 90%.
- To disconnect the power cord of the unit, pull it out by the plug. Never pull the cord itself.
- Pay attention when laying the connection cable and observe that the cable is not subject to heavy loads, kinks, or damage and no moisture can get in.
- Do not attempt to disassemble the camera board from the dome.
- The warranty becomes void if repairs are undertaken by unauthorized persons. Do not open the camera housing.
- Never point the camera towards the sun with the aperture open. This can destroy the sensor.
- **Continuous operation in „AF" mode is not recommended. Lifetime of the camera could be limited.**
- Installation, maintenance and repair have to be carried out only by authorized service centers.
  Before opening the cover disconnect the unit from mains input.
- The fitter is responsible for the system of protection being followed in accordance with the technical data, e.g. by sealing of the cable outlet with silicone.
- All openings provided in the housing for assembly purposes must be closed and/or sealed.
- Contact your local dealer in case of malfunction.
- Only use original parts and original accessories from Videor E. Hartig GmbH.
- Do not use strong or abrasive detergents when cleaning the dome. Use a dry cloth to clean the dome surface.
  In case the dirt is hard to remove, use a mild detergent and wipe gently.
- **During assembly, care must be taken to ensure that existing seals are correctly inserted and are not displaced as a result of assembly.**
  You must not continue to use damaged seals.

NOTE: This is a class A digital device. This digital device can cause harmful interference in a residential area;
in this case the user may be required to take appropriate corrective action at his/her own expense.

1. Introduction

1.1 Features

The Fastrax III dome camera and the keyboard controller make up the building blocks for any surveillance/security system. Using multiple Keyboard Controllers and multiple dome cameras, no place is too large for monitoring. Extensible and flexible architecture facilitates remote control functions for a variety of external switching devices such as multiplexers and DVRs.

- Built-in optical power zoom camera with True Night Shot function
- 240 Preset positions.
- 8 Tours consist of Preset, Pattern, Auto-Scan and other Tours can be programmed with over 300 functions and Preset location.
  While moving, each Preset scan can be watched in smooth **Vector Scan** mode.
- 16 Auto Scans with the normal, the vector, and the **random** mode and the Endless Auto-Pan with 13 speed steps
- 8 Patterns (up to 500second)
- 8 Privacy zones
- 16 Area Titles
- 8 Alarm inputs / 4 Aux outs (NC & NO)
- Variable speed from 0.1°/sec to 380°/sec
  Three Variable speed (SLOW, NORMAL, TURBO)
  Turbo speed is Max 380°/sec with CTRL key pressed
- Pan / Tilt speed is inversely proportional to the zoom ratio with the option.
- Maximum speed is 380°/sec when preset command
- Auto Calibration from 0.1° to 6° (tilt range 0° to 180°)
- Programmable user preferences (alarm, preset, title, etc.)
- 180° Digital Flip or 90° Auto Flip depended on the model
- Up to 999 selectable camera addresses (3999 by software setting)
- Multi-Language Menu Display, Password Confirmation
- Function Run Menu using DVR without function key (Pattern, SCAN, ...)
- Built-in RS-485/422 receiver driver
- Optional Clear bubble with black liner (shelter) for concealing the camera
- Optional Tinted Bubble, Indoor & Outdoor pendant housing with heater & blower, Indoor Flush mount, Parapet mount & Roof Top mount

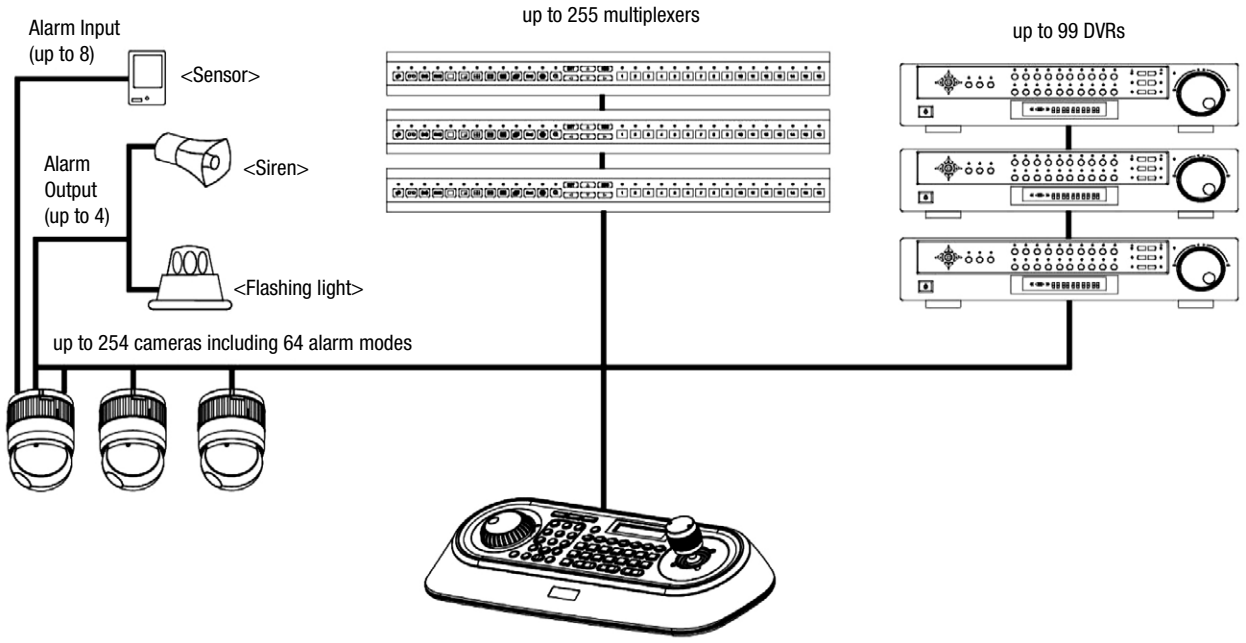


Figure 1 - Typical System Configuration

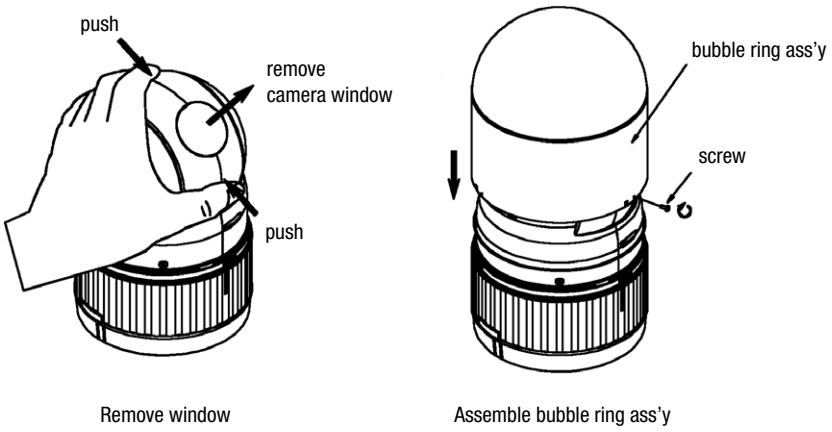


Figure 2 - Optional Assemble bubble ring ass'y

NOTE: **It is recommended to remove camera window for improving picture quality when you assemble bubble ring ass'y.**

CAUTION: **When installing a Fastrax dome on a high pole outside, caution should be taken to avoid vibration and shaking of Fastrax dome due to windload or shock of passing heavy vehicles. If pole is not stable enough, it may cause malfunction in accurate tilt positioning.**

2. Installation and Configuration

2.1 Package Contents

The package contains the following:

1x Fastrax III (Dome Camera)

1x Bubble ring (optional)

1x Instruction manual (this document)

3x Assembly screws for attaching Fastrax III

3x Plastic anchor

1x 10Pin Connector

2x 12Pin Connector

CAUTION: Be sure to have caution labels (E version only) on both body and base of the camera.
Different version will not support alarm input and output.

The dome camera is for use in surface mounting applications and the mounting surface should be capable of supporting loads up to 4.5kg.

The dome camera's base should be attached to a structural object, such as a hard wood, wall stud or ceiling rafter that supports the weight of the dome camera.

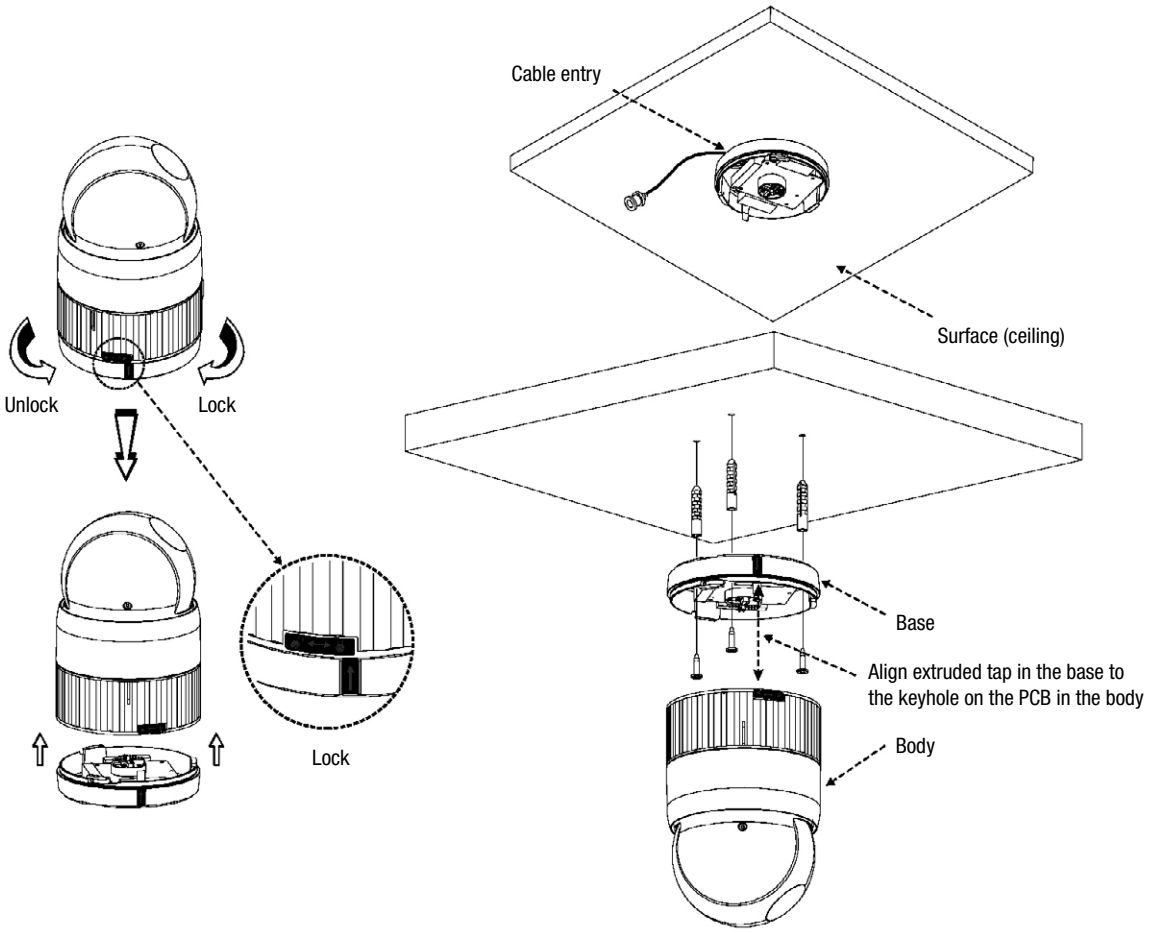


Figure 3 - Installation

2.2 Basic Configuration of Fastrax III Dome Camera System

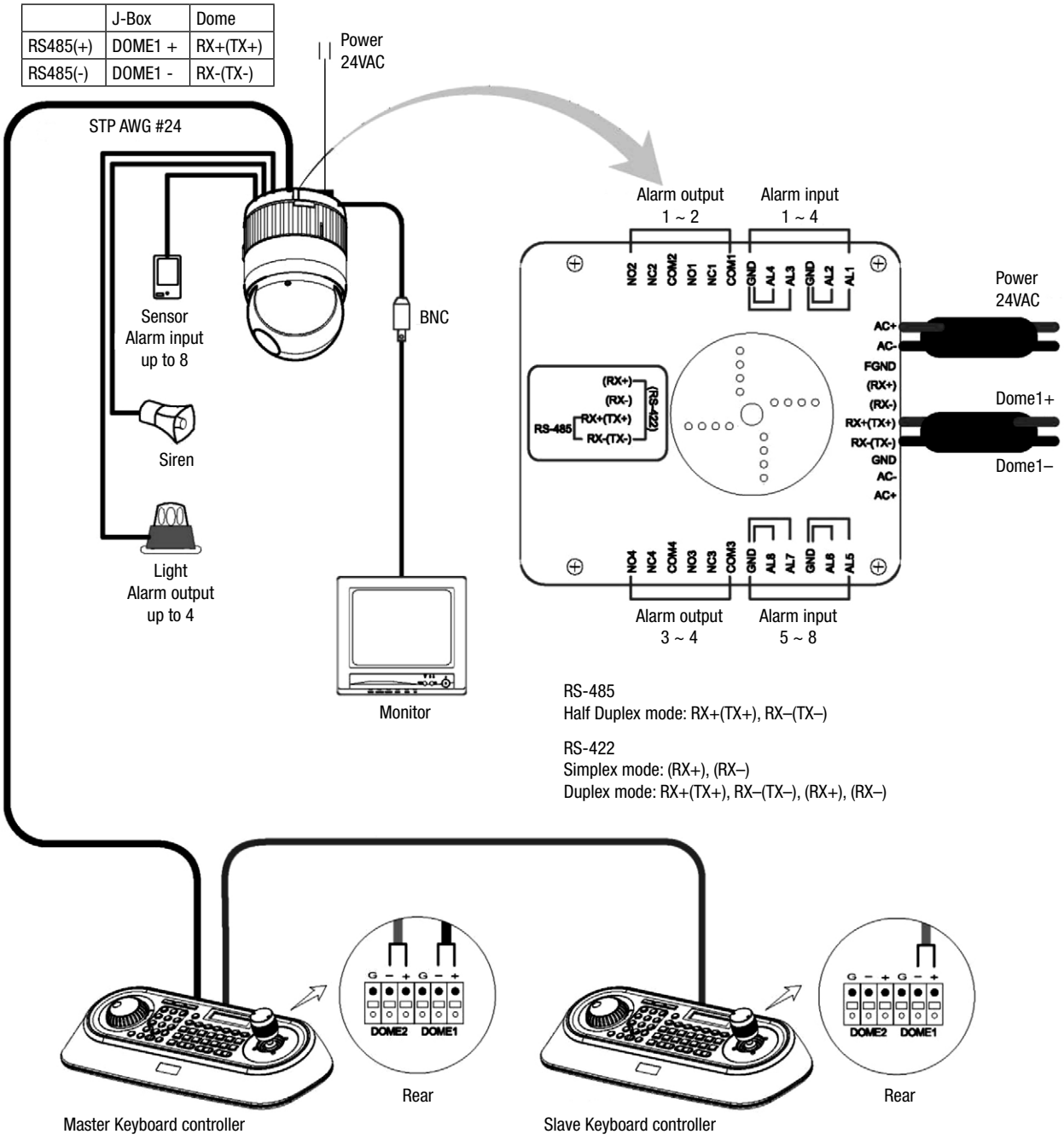


Figure 4 - Basic installation diagram

The dome camera must be installed by qualified service personnel in accordance with all local and federal electrical and building codes.
The system should be installed according to Figures 4 through 9.

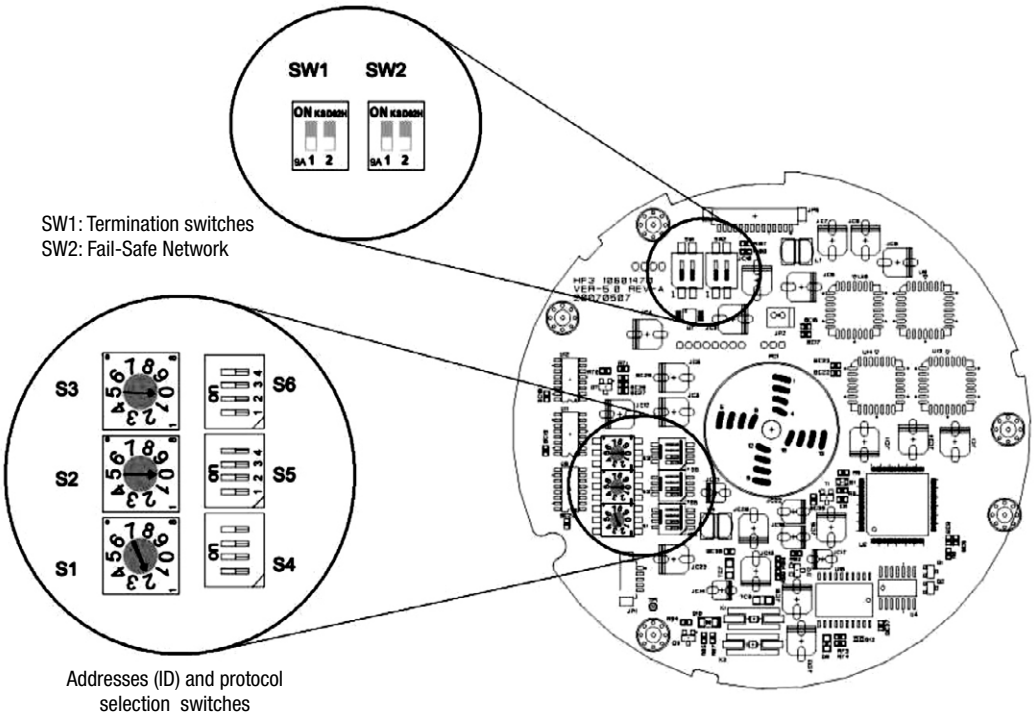
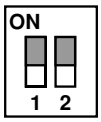


Figure 5 - Layout of Switches

2.3 Setting Dome Camera Termination

The device which is connected at end of line, whether it be a dome camera or keyboard controller, must have the cable for communication terminated by setting the appropriate DIP switch. Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 1.2km.

SW1



SW1	1	2
Terminated	ON	ON
Not terminated	OFF	OFF

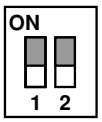
Figure 6 - Setting Dome Camera Termination

2.4 Fail-safe Network

When you control the dome by the other device not own keyboard, some error may be existed in the serial communication. The reason is caused by the other device without the fail-safe network.

At this time, you solve the problem to set this DIP switch to ON of the nearest dome from the other device only.

SW2



SW2	1	2
ON	PULL-UP	PULL-DOWN
OFF	NONE	NONE

Figure 7 - Setting Dome Camera Termination

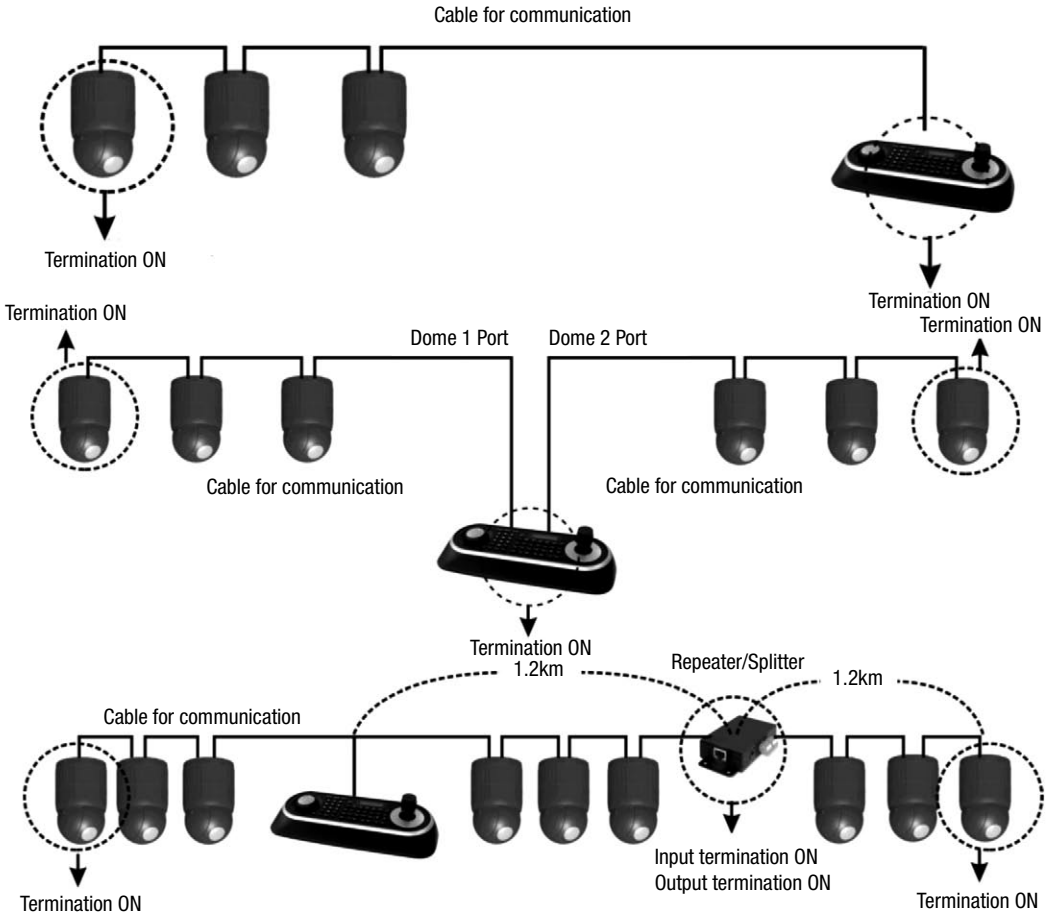


Figure 8 - Termination Diagram

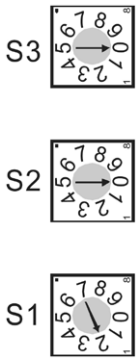
2.5 Setting Dome Camera Address (ID)

To prevent damage, each dome camera must have a unique address (ID). When installing multiple dome cameras using a multiplexer, it is suggested that the dome camera address matches the multiplexer port number.

If you wan to set the address more than 999, you should connect the service provider.

Example: Port 1 = Dome 1, Port 2 = Dome 2 ... Port 16 = Dome 16. If more than 16 dome cameras are installed using two or more multiplexers, ID of the dome camera should be ID of MUX x No. of camera IN. (e.g. multiplexer ID= n, Camera IN= m then ID of Dome =16x (n-1) +m)

Refer to Figures 4-5 for setting the dome camera address (ID) and protocol selection.



Dome ID	S3	S2	S1
1	0	0	1
2	0	0	2
…	…	…	…
999	9	9	9

Figure 9 - Setting Dome Camera Address (ID)

2.6 Setting Dome Camera Protocol

If a dome camera is to be installed with a Fastrax keyboard controller, select the default protocol.
Consult service personnel if a dome camera is installed with device other than a keyboard controller.

S/W		On	Off	Function
D1	S4-1	Enable	Disable	Alarm
D2	S4-2	PAL	NTSC	NTSC/PAL
D3	S4-3			(Reserved)
D4	S4-4	RS-422	RS-485	RS-422/RS-485

D5	D6	D7	D12	Protocol
S5-1	S5-2	S5-3	S6-4	
Off	Off	Off	Off	F2, F2E, Pelco-D, Pelco-P: **Default**
Off	Off	On	Off	F2, F2E
Off	On	Off	Off	Sensormatic RS-422
Off	On	On	Off	Pelco-D, Pelco-P
On	Off	Off	Off	Vicon
On	Off	On	Off	Ernitec
On	On	Off	Off	(Reserved)
On	On	On	Off	F2
Off	Off	Off	On	**Philips (Bosch)**
Off	Off	On	On	(Reserved)
Off	On	Off	On	**Dynacolor**
Off	On	On	On	(Reserved)

D8	D9	D10	Baud Rate
S5-4	S6-1	S6-2	
Off	Off	Off	2400 bps
Off	Off	On	4800 bps
Off	On	Off	9600 bps **(Default)**
Off	On	On	19200 bps
On	Off	Off	38400 bps

D11	Parity Bit
S6-3	
Off	None
On	Even

Figure 10 - Protocol Selection Switches

2.7 Connections

- **Connecting to the RS-485/-422**

  The dome camera can be controlled remotely by an external device or control system, such as a control keyboard, using RS-485 half-duplex, RS-422 full duplex or simplex serial communications signals. Connect Marked Tx+, Tx- to Tx+(Rx+) and Tx-(Rx-) of the RS-485 control system.

  If control system is RS-422, connect Rx+(Tx+), Rx+ (Tx-) and Rx+, Rx- of the dome camera to Rx+, Rx- and Tx+, Tx- of the control device respectively.

- **Connecting Video out connector**

  Connect the video out (BNC) connector to the monitor or video input.

- **Connecting Alarms**

  AL1 to 8 (Alarm In)

  You can use external devices to signal the dome camera to react on events. Mechanical or electrical switches can be wired to the AL (Alarm In) and GND (Ground) connectors. See Chapter 3 - Program and Operation for configuring alarm input.

  GND (Ground)

  NOTE: All the connectors marked GND are common.

  Connect the ground side of the Alarm input and/or alarm output to the GND connector.

  NC(NO)1 TO 4 (Normal Close or Normal Open: Alarm Out)

  The dome camera can activate external devices such as buzzers or lights. Connect the device to the NC(NO) (Alarm Out) and COM (Common) connectors. See Chapter 3 - Program and Operation for configuring alarm output.

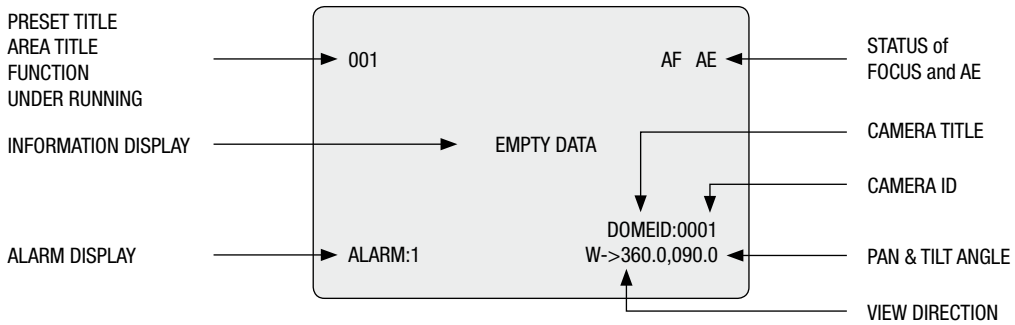
- **Connecting the Power**

  Connect the power of 24VAC 850mA to the dome camera.

  Use certified / Listed Class 2 power supply transformer only.

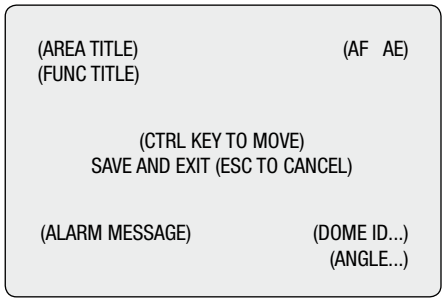
2.8 Getting Started

Once installed apply power to the dome camera. The dome camera will start a configuration sequence.



OSD Position

The dome can move the OSD position in the OSD position setup.



OSD Position Setup

3. Program and Operation

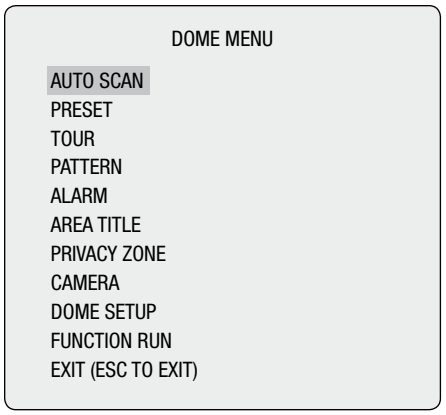
3.1 Dome Camera Selection

Before you program or operate a dome camera, you must select the dome camera by pressing the dome camera **No.** + **CAM**.

Example: Pressing 1, 0 and CAM key sequentially will select dome camera 10. The selected dome camera ID will be displayed on the LCD monitor of the keyboard controller.

3.2 Accessing On-Screen Menu Utility

You can call up the On-screen menu utility on your monitor by pressing **MENU** key on the keyboard controller, the following On-screen menu utility will appear:

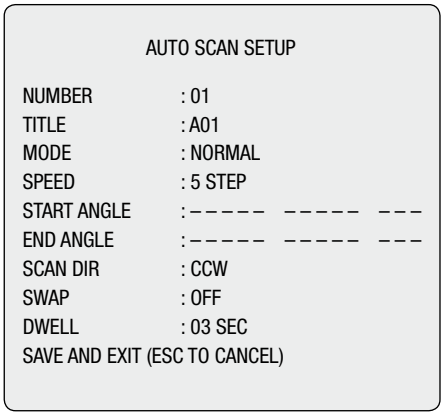


3.3 How to control On-Screen Menu Utility

Button	Function
MENU	Call on On-screen menu utility
Joystick up or down	Navigate through the menu items.
Joystick left or right or IRIS OPEN	Go into the sub-menu items.
Joystick left or right or Zoom handle twist or Tele, Wide	Change value. Enter the editing title mode.
CTRL + Joystick	Change value of angle.
IRIS OPEN	Enter the changing angle mode.
IRIS CLOSE	Exit the changing angle mode.
ESC	Escape (EXIT)

3.4 Auto Scan (Shortcut: **Scan**)

The Auto scan supports up to 17 programmed angles at user-programmable speeds. Follow these steps to program Auto Scan:


AUTO SCAN SETUP
NUMBER : 01
TITLE : A01
MODE : NORMAL
SPEED : 5 STEP
START ANGLE : – – – – – – – – – – – – – –
END ANGLE : – – – – – – – – – – – – – –
SCAN DIR : CCW
SWAP : OFF
DWELL : 03 SEC
SAVE AND EXIT (ESC TO CANCEL)

NUMBER 01-08, 10-17, **09**: AUTO PAN mode

TITLE up to 12 characters

MODE NORMAL, VECTOR, RANDOM (AUTO PAN mode: NORMAL, RANDOM only)

NORMAL: Move from start point to end point in panning only.

VECTOR: Move from start point to end point including tilt and zoom simultaneously and linearly. In some model, the zoom is fixed at wider angle and the zoom magnification information is not displayed.

RANDOM: Move randomly between the start point and the end point.

SPEED 1 - 13 step, the lower number means the slower speed.

SCAN DIR Set the scan direction, CCW (Counterclockwise), CW (Clockwise)

SWAP Swap the start point for the end point.

DWELL Set the dwell time in the tour mode, 01 – 99 seconds

1. Press the **Scan** key to enter AUTO SCAN menu directly. Or press the **Menu** key to display the main menu on the monitor. Scroll to AUTO SCAN and push the **Joystick** to the right.
2. Select the „NUMBER" and set the desired number by pushing the **Joystick** left or right.
3. Select the „TITLE" and twist the **Joystick** to enter the title edit mode.
4. Twist the **Joystick** by changing the alphanumeric characters and move the next position. Or move down to the character table and press **CTRL** or **IRIS OPEN** at the desired character then the cursor position moves to the next position automatically. Push the **Joystick** left or right at the „ALL DELETE" field to delete all characters. Push the **Joystick** left or right at the „EXIT" field to finish title edit menu.

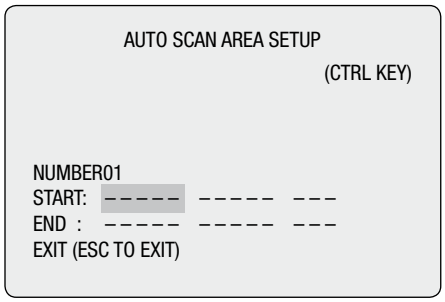
5. Select „MODE" and „SPEED".
6. Select „START ANGLE". Hold down the **CTRL** key while selecting the start position using the **Joystick**. Current panning position will be displayed. Release **CTRL** key to complete the selection of the start position. Or Press **IRIS OPEN** then the „CTRL" displays. Move the desired position and the zoom position. Press **IRIS CLOSE** then the „CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field. To adjust at the one zoom interval, twist the **Joystick** at the zoom field.
7. Select „END ANGLE." Hold down the **CTRL** key while moving the Joystick to select the end position. The end position angle should be larger than start position. Release the **CTRL** key to complete the selection of the end position. Or Press **IRIS OPEN** then the „CTRL" displays. Move the desired position and the zoom position. Press **IRIS CLOSE** then the „CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field. To adjust at the one zoom interval, twist the **Joystick** at the zoom field.
8. Set „SCAN DIR" to CCW or CW.
9. Select „SWAP". Set to ON, to exchange the start angle and the end angle.

10. Set „DWELL TIME".
11. Select Save and Exit and push the **Joystick** to the right or press **IRIS OPEN**. Press **ESC** or **IRIS CLOSE** to exit the program without saving. Pressing the **HOME** key delete stored data at the angle field.

To set the position using the preset position:

a. Before entering the AUTO SCAN menu, select a preset position as a starting point for Auto Scan.
   Example: 2 + PRST and do step 1 to 4. In step 5, just press the **CTRL** key at the start angle position, the current position will be displayed as a start position.
b. Save and exit from the menu.
c. In normal mode, call a preset to be the end point of scan. Press **3** + **PRST** then press **SCAN** key to enter the AUTO SCAN menu. Move the cursor position to END ANGLE. Just press **CTRL** key at the end angle position. Save and exit from the menu.

Press **SCAN** key on the angle field to display with the small OSD. Then the screen will show as below.



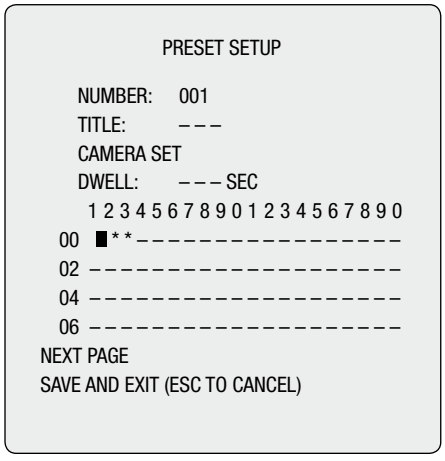
The setting procedure is the same as above.

NOTE: 09: AUTO-PAN mode (Endless panning)

3.5 Preset (Shortcut: **PRST**)

If you need to view specific places routinely, you should program presets. A preset is a programmed video scene with automatic pan, tilt, zoom, focus, and AE settings. Once programmed, placing the number position and pressing a **PRST** button on your controller calls up that preset automatically. In addition, presets may be assigned to alarm actions or as the „home" position for the dome camera. As many as 240 presets, whose positions are saved in the dome's firmware, may be programmed.

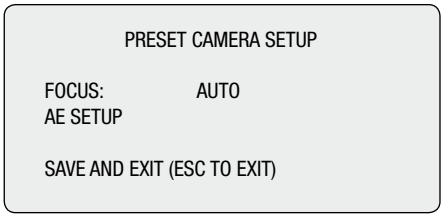
There are three pages of preset menu. Each page has 80 presets. Pages can be scrolled by pushing the **Joystick** to the Left or Right on the first or last No. of Preset.



– : Blank preset position
* : Position has the preset
■ : Current cursor position

Follow steps below to store the Preset positions:

1. Press the **PRST** key to enter the preset menu directly. Or press the **MENU** key to display the main menu on the monitor. Scroll to preset and push the **Joystick** to the right.
2. Select the blank preset position to be stored by pushing the **Joystick** up, down, right, or left.
3. After selecting a blank position, press and hold **CTRL**. Use the **Joystick** to control the direction of the camera and lens.
4. After aiming the camera (view direction and lens control), release **CTRL**. The cursor will be on the Title then twist the **Joystick** handle or Press **Tele** or **Wide** Key to edit the preset title. Follow the procedure of the auto scan above to edit titles.
5. Select „CAMERA SET" and pushing the **Joystick** left or right. Then the preset camera setup displays.



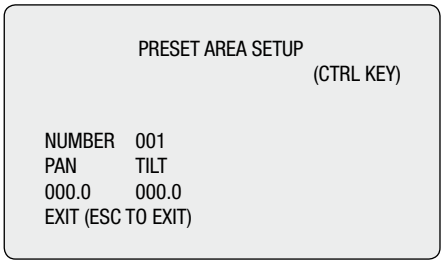
Set FOCUS: AUTO, MANUAL, ONE PUSH

Select „AE SETUP" and pushing the **Joystick** left or right. Then the AE setup displays. Refer to the AE SETUP in the camera setup.

6. Set „DWELL TIME"(03-99seconds)
7. To select the next page of presets, scroll the page by pushing the **Joystick** to the Left on the first and last columns of the menu.
8. Repeat steps 2 through 7 for each additional preset position.
9. Select SAVE AND EXIT by pushing the **Joystick** to the right. Press **ESC** to exit the Preset menu without saving.

NOTE: Press the HOME key at programmed preset position (*) to delete a programmed preset view.

The position, which is marked with *, already has the preset view assigned. To review the stored preset, press **PRST** key on the *. The camera will show the stored preset scene.



Hold down the **CTRL** key while selecting the desired scene using the **Joystick**. Current position will be displayed. Release **CTRL** key to complete. Or Press **IRIS OPEN** then the „CTRL" displays. Move the desired position and the zoom position. Press **IRIS CLOSE** then the „CTRL" disappears. Select Exit and push the **Joystick** to the right. Follow steps above to save the preset.

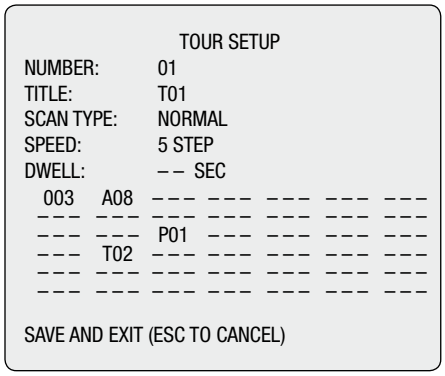
3.6 Shortcut of Preset Program

After selecting the desired scene, press No. (**1** to **240**), and press **CTRL** and **PRST** subsequently. The current view will be stored to the selected preset number if the preset number is empty. If selected preset number is not empty, „OVER WRITE" message will be displayed on the monitor and select the „OK" and push the **Joystick** to the right to overwrite.

Example: **1** , **0** , **1** + **CTRL** + **PRST** will store current view as preset No. **101**. In this case, focus will be programmed as Auto, dwell time will be set to 3 seconds, and the current AE mode will be programmed.

3.7 Tour (Shortcut: **TOUR**)

There are 8 programmable Tours. Each Tour consists of up to 42 Preset positions, Patterns, Scans or other Tours (second-level). Using second-level tours, it can be expanded to over 300 functions in a single tour.



– – –:	blank position
SCAN TYPE:	NORMAL/ VECTOR
SPEED:	1 - 13 steps, the lower number means the slower speed.
DWELL:	03-99 sec (available in the normal mode only)
003:	Preset (1~240)
A08:	Auto Scan (1~8, 10 ~17)
P01:	Pattern (1~8)
T02:	Tour (1~8)

Follow the steps below to program the Tours:

1. Press **MENU** to display the main menu on the monitor. Scroll to Tour and push the **Joystick** to the right to enter the TOUR menu. Or just press the **TOUR** key on the keyboard.
2. Select the" NUMBER" and set the desired number by pushing the **Joystick** left or right.
3. Choose a blank position to be programmed by pushing the **Joystick** up, down, right, or left.
4. To add a stored preset, twist the **Joystick** then the stored preset number displays.
5. To place predefined functions other than preset, press **TOUR**, **PTRN**, or **SCAN** for Tour, Pattern or Auto Scan respectively.
6. You can also overwrite the programmed number and to remove a stored number from the Tour, press the **HOME** key on the stored number, a blank position mark (– – –) will be displayed.
7. Repeat Step 2 through 5 for each desired position. Each title will be displayed on top of the line.
8. To edit the title, follow the procedure of the auto scan above to edit titles
9. Select Save and Exit and push the **Joystick** to the right. Press **ESC** to exit the program without saving.

You can expand the tour sequence by calling other programmed tours.

NOTE: The speed applies in the vector mode only.

NOTE: In the Tour mode, in conjunction with preset and Auto Scan, you can make the camera travel from a preset position to another preset position at a specific speed.

Example: Preset 001 > 002 > 003 > 004 > 005 > 006, Auto Scan 01 starts at preset 002, ends at preset 003, Auto Scan 02 starts at preset 005, ends at preset 006; Tour 001, 002, A01, 004, A02.

1 **–>** 2 2~3 **–>** 4 **–>** 5~6, repeat
where **–>** : Quick move, ~ : Programmed speed

To change the dwell time of the preset in the tour:

Use the **Joystick** to move the cursor to a stored preset position. By pressing **PRST** key, the camera will move to the stored Preset view and the cursor moves to the dwell time field.

After changing the dwell time, press **PRST** key and the cursor moves to the preset number.

To assign the functions other than preset in the tour when the function key is not existed:

Use the **Joystick** to move the cursor to a stored preset position. Pressing **CTRL** key or **IRIS OPEN** key will change the preset number to other function (AUTO SCAN, PATTERN, TOUR, PRESET) with the first programmed number. To change the number, twist the J**oystick** or press **Tele** or **Wide** key.

3.8 Pattern (Shortcut: **PTRN**)

The Pattern feature records user control of the selected dome camera. Up to four 8 patterns can be stored and played back by pressing No.+ **PTRN** keys subsequently.

PATTERN SETUP

(CTRL KEY)

NO.	TITLE	SEC	PERCENT
01:	P01	000	00.0%
02:	P02	000	00.0%
03:	P03	000	00.0%
04:	P04	000	00.0%
05:	P05	000	00.0%
06:	P06	000	00.0%
07:	P07	000	00.0%
08:	P08	000	00.0%
TOTAL:		0000	00.0%

SAVE AND EXIT (ESC TO CANCEL)

Follow steps below to program the Pattern:

1. Press **MENU** to display the main menu on the monitor. Scroll to Pattern and push the **Joystick** to the right to enter the pattern menu. Or just press the **PTRN** key on the keyboard.
2. Select the desired pattern to be programmed by pushing the **Joystick** Up or Down. If the pattern is not 000, a pattern has already been recorded. Patterns can be over written.
3. Press and hold down the **CTRL** key while controlling the camera direction and zoom with the **Joystick**. The dome will be automatically recorded until you release the **CTRL** key. Or Press **IRIS OPEN** then the „CTRL" displays. Move the position and the zoom position. Press **IRIS CLOSE** then the „CTRL" disappears.
4. Select Save and Exit and push the **Joystick** to the right. Press **ESC** to exit the program without saving.
5. To edit the title, follow the procedure of the auto scan above to edit titles.

NOTE: Press the HOME key at any programmed position to delete the pattern.

NOTE: If total recording time reaches 500 seconds, it will automatically stop for a moment.

Press **PTRN** key on the title field to display with the small OSD. Then the screen will show as below.

PATTERN AREA SETUP

(CTRL KEY)

NUMBER 01
000 00.0%
0001 01.0%
EXIT(ESC TO EXIT)

The setting procedure is the same as above.

3.9 Alarm

ALARM SETUP

NO	PRI	FUN	IN	OUT	HLD	LATCH
01	1	001	NC	OFF	03	OFF
02	2	A01	NO	OUT1	03	OFF
03	1	– – –	OFF	OUT1	03	OFF
04	1	– – –	OFF	OUT4	03	OFF
05	1	– – –	OFF	OFF	03	OFF
06	1	– – –	OFF	OUT1	03	OFF
07	1	– – –	OFF	OUT1	03	OFF
08	1	– – –	OFF	OUT4	03	OFF

DWELL: 03

RELAY OUT SETUP

SAVE AND EXIT (ESC TO CANCEL)

NO: Alarm input number

PRI (priority): The lower number has higher priority. (0-8)

FUN (function): Stored function number to be called by alarm.

IN: NO/NC - normally open/closed; OFF - ignore

OUT: OUT1~OUT4 - Relay out 1,2,3,4, OFF - No output.

HLD (HOLD): Alarm will be held for programmed time (03 to 99 seconds)

LATCH: ON - Shows all alarms including past alarm.
OFF - Shows activated alarms only.

DWELL: means the dwell time during multiple alarms, 03 to 99 seconds.

The RELAY OUT setup is helpful when the outdoor housing is used with the dome.

Example: When you connect the relay output of the dome to the heater connector of the outdoor housing, the relay output can operate during the setting time only.

RELAY OUT SETUP

OUT1: ALARM
OUT2: 1 MIN
OUT3: ALARM
OUT4: 5 MIN

EXIT (ESC TO EXIT)

ALARM: The relay output is operated during an alarm operation or by the short key of our keyboard.

1-5 MIN (minute): The relay output is operated during this setting time only by the function run of the dome menu or the short key of our keyboard.

NOTE: This 1-5 MIN setting is not operated by an alarm.

NOTE: If you disable Alarm by dip switch, Alarm menu will be displayed following screen.

ALARM SETUP

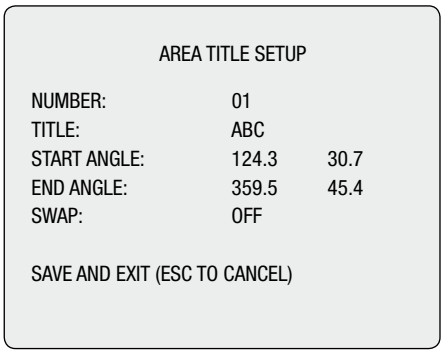
ALARM DISABLED
CHECK THE DIP SWITCH

EXIT (ESC TO EXIT)

There are 9 levels of priority. The function can be selected by PRESET, AUTO SCAN, PATTERN or TOUR and „0" is the highest priority. Lower priority alarms won't be serviced until the higher priority alarm is completed. Equal priority alarms will be serviced repeatedly with the dwell time.

3.10 Area Title

Enter a specific name on programmed angle between START and END. For the screen below, when the camera points at an angle between 124.3° (PAN), 30.7° (TILT) to 359.5° (PAN), 45.4° (TILT), ABC will be displayed on the screen.



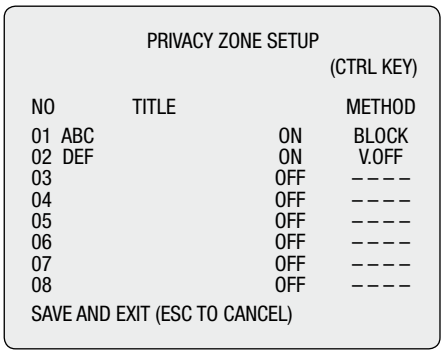
NUMBER: 01 - 16
TITLE: up to 12 characters
SWAP: swap the start point for the end point

1. Select the „NUMBER" and set the desired number by pushing the **Joystick** left or right.
2. To edit the title, follow the procedure of the auto scan above to edit titles.
3. Select „START ANGLE". Hold down the **CTRL** key while selecting the start position using the **Joystick**. Current panning position will be displayed. Release **CTRL** key to complete the selection of the start position. Or Press **IRIS Open** then the „CTRL" displays. Move the desired position. Press **IRIS Close** then the „CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field.
4. Select „END ANGLE." Hold down the **CTRL** key while moving the Joystick to select the end position. Release the **CTRL** key to complete the selection of the end position.

   Or Press **IRIS Open** then the „CTRL" displays. Move the desired position. Press **IRIS Close** then the „CTRL" disappears. To adjust at the 0.1 degree interval, twist the **Joystick** at the pan field and the tilt field.
5. Select „SWAP". Set to ON, to exchange the start angle and the end angle.
6. Select „Save and Exit" and push the **Joystick** to the right or press **IRIS Open**. Press **ESC** or **IRIS Close** to exit the program without saving.

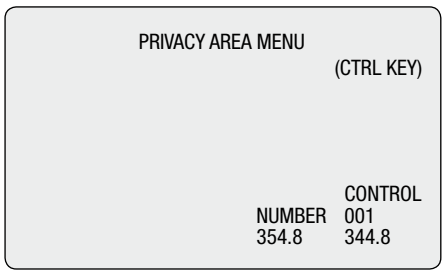
3.11 Privacy Zone

Hide up to 8 unwanted scenes in a camera.



1. Place the cursor at the title field.
2. Holding down the **CTRL** key displays the privacy area menu while selecting the position using the **Joystick**. Current position will be displayed. Release **CTRL** key to complete the selection of the position.

   Or Press **IRIS OPEN** then the privacy area menu displays. Move the desired position. Press **IRIS CLOSE** then the „CTRL" disappears and returns to the previous menu.

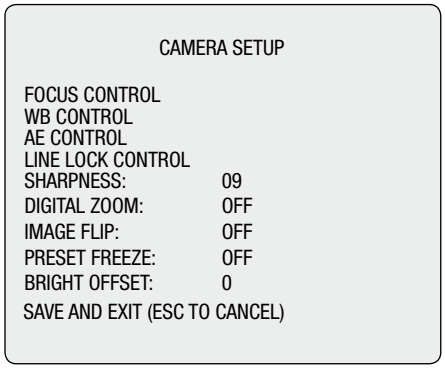


3. Place the cursor at the title field. Twist the **Joystick** to enter the title edit mode.
   Follow the procedure of the auto scan above to edit titles.
4. To turn the stored zone On or Off, twist the **Joystick** handle or press **Tele** or **Wide** Key.
5. Set the method, „BLOCK" or „V.OFF (video off)"
6. Select the Save and Exit option by pushing the **Joystick** up or down. Save and exit the program by pushing the Joystick to the right.
   Press **ESC** to exit the program without saving.

Press the **HOME** key to delete programmed privacy zone at the title field.

3.12 Camera Menu, Type EDC-3182 (18x, Art. No. 74169), EDC-3262 (26x, Art. No. 74170) and EDC-3362 (36x, Art. No. 74161)

NOTE: The features will vary depending on the camera module installed in your dome camera.



SHARPNESS The higher the value, the more edges in the picture will be enhanced (0~15).

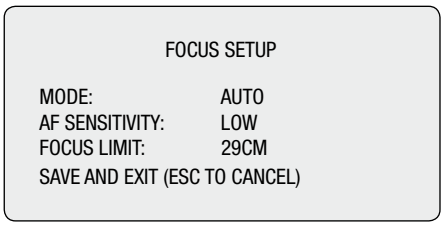
Digital ZOOM OFF: Zoom range is limited to the optical.
2x: Zoom is extendable up to 2x of digital range.
4x: Zoom is extendable up to 4x of digital range.
MAX: Zoom is extendable Max digital zoom range.

IMAGE FLIP This function turns the video output from the camera upside down and reverses it horizontally.
This option is helpful to install in the opposite side.

PRESET FREEZE ON: the image is frozen during calling preset.

BRIGHT OFFSET (-7, …, **0 (default)**, …7): Adjust the brightness level (AUTO, SHUTTER PRIO, IRIS PRIO mode only) .

- **FOCUS CONTROL**



MODE AUTO / MANUAL / ONE PUSH / CONSTANT MANUAL
Use manual mode in normal use.

AF SENSITIVITY NORMAL / LOW

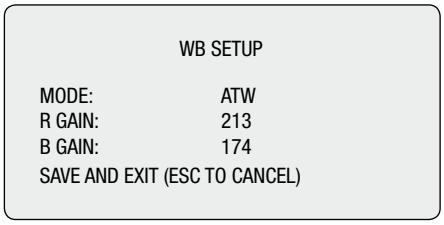
NORMAL: Use this option when shooting fast motion.

LOW: Offers better focus stability. In low luminance conditions, Auto Focus stops operation even when brightness changes, enabling stable images of moving objects.

FOCUS LIMIT This distance is approximate value and the focus operate from the setting value.

CAUTION: Avoid continuous, 24-hour use of the auto focus. This will shorten the lifespan of the lens.

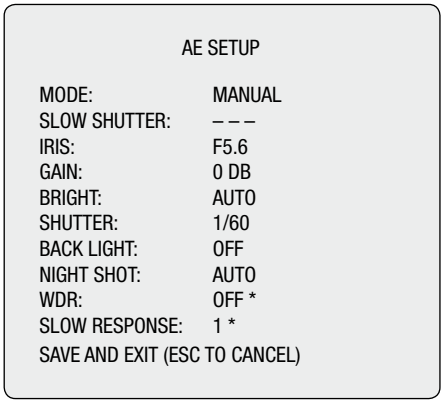
- **WB (White Balance) CONTROL**



MODE	AUTO / INDOOR / OUTDOOR / ONE PUSH / ATW / MANUAL	
	MANUAL	Control of R and B gain
	AUTO	Computes the white balance value output using colour information from the entire screen automatically (3000 to 7500K)
	INDOOR	3200K base mode
	OUTDOOR	5800K base mode
	ONE PUSH	One push white balance mode is a fixed WB mode that may be automatically readjusted at the stop after moving.
	ATW	Auto tracing white balance (2000 to 10000K)
RGAIN	0 ~ 255	
BGAIN	0 ~ 255	

RGAIN / BGAIN modes are controllable only in MANUAL Mode

- **AE CONTROL**



MODE	AUTO / MANUAL / SHUTTER PRIO / IRIS PRIO / BRIGHT	
	AUTO	Auto Iris and Gain, Fixed Shutter speed (NTSC: 1/60 sec, PAL: 1/50 sec)
	MANUAL	Variable Shutter, Iris and Gain
	SHUTTER PRIO	Variable Shutter speed, Auto Iris and Gain
	IRIS PRIO	Variable Iris, Auto Gain and Shutter speed
	BRIGHT	Variable Iris and Gain
SLOW SHUTTER	ON / OFF	
IRIS	CLOSE / F28 (26x, 36x) / F22 / F19 / F16 / F14 / F11 / F9.6 / F8.0 / F6.8 / F5.6 / F4.8 / F4.0 / F3.4 / F2.8 / F2.4 / F2.0 / F1.6 / F1.4 (18x)	
GAIN	0 / 2 / 4 / 6 …… / 28 / -3 DB	
BRIGHT	0, 1, 2, 3, 4 ..... 29, 30,31	
SHUTTER	1/1 , 1/2 , 1/4 (3), 1/8 (6). .. 1/4000 (3500), 1/6000, 1/10000	
BACK LIGHT	Objects in front of bright backgrounds will be clearer with BLC ON.	
NIGHT SHOT	AUTO, ON, OFF, GLOBAL	
WDR*	ON, OFF	
SLOW RESPONSE*	1-32	

NOTE: Values in ( ) are for PAL Camera.

NOTE: The Back Light operates in AUTO mode only.
For example, if you change the back light to ON, the camera will change AE mode to „AUTO".

The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared.

AUTO	Camera goes in to B&W mode at low light.
GLOBAL	Controlled by the keyboard
	The operator can enable NIGHT SHOT for all dome cameras at the same time.
	If the NIGHT SHOT mode is set to GLOBAL, „999" + **ENTR** will turn Off the NIGHT SHOT mode and „888" + **ENTR** will turn On the NIGHT SHOT mode.
ON	B/W mode
OFF	Colour mode

NOTE: Selecting the Night Shot to Auto mode will change AE mode to „AUTO".

SLOW RESPONSE

The slow response function allows you to lengthen the automatic exposure response speed from 1 up to 32 times. For example, with the normal setting (about 1 second), if the headlights of a car are caught by the camera, the camera automatically adjusts the exposure so that it can shoot a high-intensity subject (in this case, the headlights). As a result, images around the headlights, that is, the rest of the subject, except the headlights, becomes relatively dark, and poorly distinguished. However, using the slow response function can still easily distinguish the portions of the image surrounding the headlights.

- **LINE LOCK CONTROL**

```
LINE LOCK SETUP

MODE:              INTERNAL
PHASE:             000
SAVE AND EXIT (ESC TO CANCEL)
```

MODE INTERNAL / EXTERNAL

PHASE Adjusts phase of picture with other cameras in EXTERNAL mode. (0~255)

SAVE AND EXIT (ESC TO CANCEL)

3.13 Camera Menu, Type EDC-3351 (35x, Art. No. 74159)

```
CAMERA SETUP

FOCUS CONTROL
WB CONTROL
AE CONTROL
LINE LOCK CONTROL
SHARPNESS:              AUTO
DIGITAL ZOOM:           OFF
IMAGE FLIP:             OFF
PRESET FREEZE:          OFF
AGC LIMIT:              25
IMAGE STABILIZATION:    OFF
SAVE AND EXIT (ESC TO CANCEL)
```

SHARPNESS The higher the value, the more edges in the picture will be enhanced (AUTO / 0 ~ 31).

Digital ZOOM OFF: Zoom range is limited to the optical.
2x: Zoom is extendable up to 2x of digital range.
4x: Zoom is extendable up to 4x of digital range.
MAX: Zoom is extendable Max digital zoom range.

IMAGE FLIP This function turns the video output from the camera upside down and reverses it horizontally.
This option is helpful to install in the opposite side.

PRESET FREEZE ON: The image is frozen during calling preset.

AGC LIMIT Set the maximum AGC gain tuning value (00-40, default: **25**)

IMAGE STABILIZATION ON: To increase the stability of an image from frame-to-frame jitter with shaking.

NOTE: When the Image Stabilzation function is operating, DSS will be disabled and WDR will be turned OFF.

- **FOCUS CONTROL**

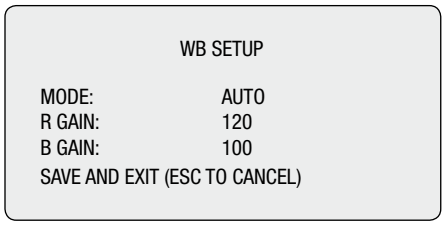
```
FOCUS SETUP

MODE:              AUTO
FOCUS LIMIT:       30CM
SAVE AND EXIT (ESC TO CANCEL)
```

MODE AUTO / MANUAL / ONE PUSH / CONSTANT MANUAL
Use manual mode in normal use.

FOCUS LIMIT Set the minimum focus length under 10x zoom ratio. (1CM / 10CM / 30CM / 1M / 1.5M; this distance is approximate value.)

CAUTION: Avoid continuous, 24-hour use of the auto focus. This will shorten the lifespan of the lens.

- **WB (White Balance) CONTROL**



MODE AUTO / MANUAL

MANUAL: Control of R and B gain

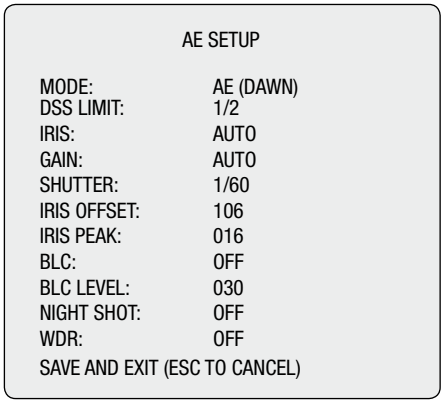
AUTO: Computes the white balance value output using colour information from the entire screen automatically (2800 to 8000K).

RGAIN 0 ~ 255

BGAIN 0 ~ 255

RGAIN / BGAIN modes are controllable only in MANUAL Mode.

- **AE CONTROL**



MODE AE / AE (DSS) / AE (DAWN) / AE (DARK) / IRIS PRIO / SHUTTER PRIO / AGC PRIO

AE: Automatic Exposure (available motion detection).

AE (DSS): Automatic Exposure with the DSS

AE (DAWN): Under the low light condition when night shot mode is AUTO, IR cut filter is automatically turned On and Off.

AE (DARK): IR cut filter is automatically turned On and Off, more dark condition than AE (DAWN).

DSS LIMIT Digital Slow Shutter Limit

1/2 (1.5), 1/4 (3),1/8 (6), 1/15 (12), 1/30 (25), OFF

IRIS F1.4 / F2 / F2.8 / F4 / F5.6 / F8 / F11 / F16 / F22 / F32

GAIN 0 / 6 / 12 / 18 / 24 / 30 DB

SHUTTER 1/2 (1.5), 1/4 (3),1/8 (6) ... 1/4000, 1/10000, 1/30000

IRIS OFFSET Set the overall brightness of a picture (000 ~ 255, default: **106**).

Increase the value to brighten the scene. Decrease the level to darken the scene.
This is helpful when the scene is too bright or too dark.

IRIS PEAK Set the effect of focusing peak, or how video peaks affect the overall picture brightness. (000-127, default :**016**)

When the scene have bright lights such as spotlight or headlight, if you set Iris peak level high, the image get dark because of the effect of focusing peaks. Overall picture darkens.
If you set Iris peak level low, the image has no effect of focusing peak and the image of spot lights get white.
Overall picture remains but spot light become very bright.
When you set Iris offset level low in an image with spotlights, a soft image may occurs because of the image of on and around the spotlights get saturated.

BACK LIGHT Objects in front of bright backgrounds will be clearer with BLC ON.

NOTE: When ON, WDR will be disabled.

BACK LIGHT LEVEL 0 ~ 255

NIGHT SHOT AUTO, ON, OFF, GLOBAL

The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared.

AUTO Camera goes in to B&W mode at low light.

GLOBAL Controlled by the keyboard

The operator can enable NIGHT SHOT for all dome cameras at the same time.

If the NIGHT SHOT mode is set to GLOBAL, „999" + **ENTR** will turn Off the NIGHT SHOT mode and „888" + **ENTR** will turn On the NIGHT SHOT mode.

ON B/W mode

OFF Colour mode

NOTE: The Night Shot function is controllable only AE, AE(DSS), and Priority (Shutter/Iris/AGC) mode.

WDR ON, WDR1, WDR2

NOTE: Values in ( ) are for PAL Camera.

AE mode	DSS	IR Remove	WDR
AE	X	O [Manual]	O
AE (DSS)	O [auto]	O [Manual]	O
AE (DAWN)	O [auto]	O [auto] : Hi sensitivity	O
AE (DARK)	O [auto]	O [auto] : Mid sensitivity	O
Shutter priority	O [Manual]	O [Manual]	X
IRIS priority	X	O [Manual]	X
AGC priority	X	O [Manual]	X

X: not available, O: available

- **LINE LOCK CONTROL**

LINE LOCK SETUP

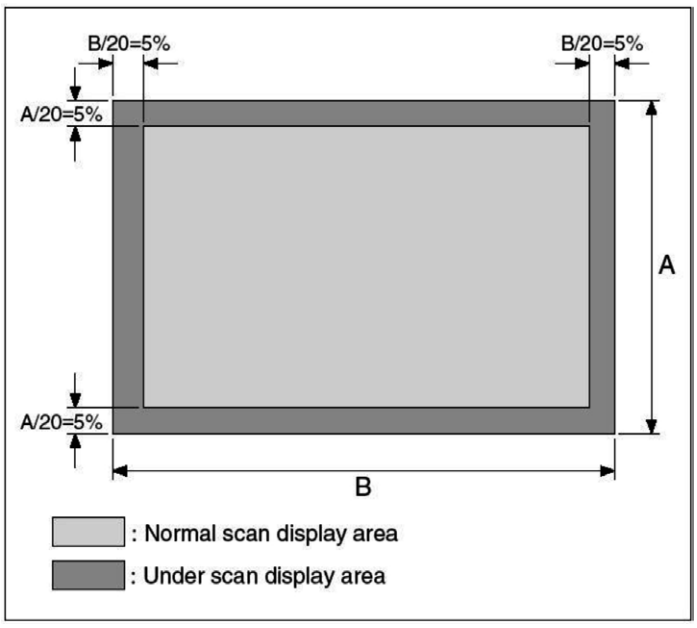
MODE: INTERNAL
PHASE: 000
SAVE AND EXIT (ESC TO CANCEL)

MODE INTERNAL / EXTERNAL
PHASE Adjusts phase of picture with other cameras in EXTERNAL mode (0~255).
SAVE AND EXIT (ESC TO CANCEL)

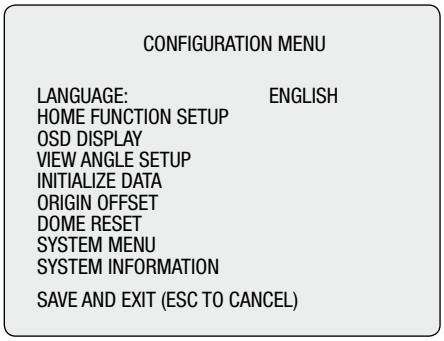
3.14 Camera, Type EDC-3262 (26x, Art. No. 74170)

Eclipse of the Lens:

The eclipse phenomenon occurs with this model. This is because a sufficient amount of aperture is not available due to the CCD size and the lens structure of this model. However, it has been verified that the eclipse will not be visible in the case of a more than 90% effective image. For your reference, see the following diagram.



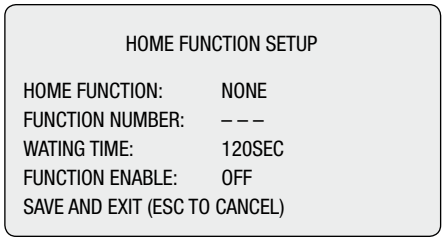
3.15 Dome Setup



- **LANGUAGE SETUP**

  LANGUAGE English, French, German, Italian, Spanish, Polish, Portuguese
  Select the language you want.

- **HOME FUNCTION SETUP**



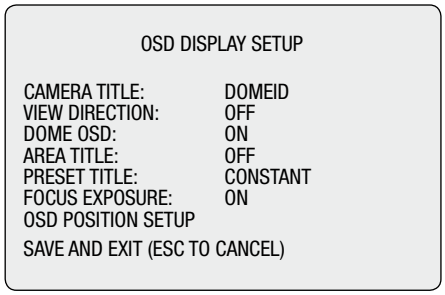
HOME FUNCTION NONE / TOUR / PATTERN / AUTO SCAN / PRESET
FUNCTION NUMBER – – –
WAITING TIME 10 ~ 240 seconds
FUNCTION ENABLE ON / OFF

The HOME FUNCTION can be set so that the camera automatically goes to PRESET, TOUR, PATTERN, AUTO SCAN after the keyboard controller has been idle for a amount of time. For example, if the controller controller is idle for 120 seconds, the camera goes to preset 1.

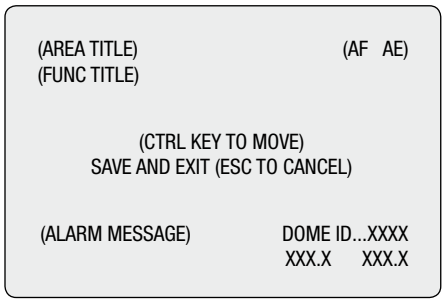
Follow these steps to program the Home position:

1. Select HOME FUNCTION by pushing the **Joystick** to the right or to the left to scroll through the NONE, TOUR, PATTERN, AUTO SCAN or PRESET functions.
2. Select FUNCTION NUMBER and push the **Joystick** to the right or to the left. The recorded function number will scroll.
3. Select WATING TIME and push the **Joystick** to the right or to the left to select from 10 to 240 seconds.
4. Select FUNCTION ENABLE and turn to ON or OFF by pushing the **Joystick** to the right or to the left.

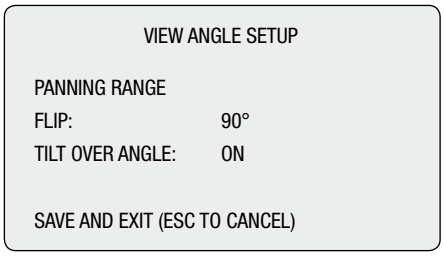
- **OSD DISPLAY**



CAMERA TITLE	Up to 6 characters	
VIEW DIRECTION	ON / OFF	„ON" sets current direction as **N** (North) and the coordinate angle to 000. „OFF" hides the directional title. Every 90 degrees of clockwise rotation will change the title to **E** (East), **S** (South), **W** (West). If using the ON/OFF option frequently, it is recommended that you set „North" as a Preset. Recall the „North" Preset before enabling the directional title.
DOME OSD	ON / OFF	All display or title will disappear when DOME OSD DISPLAY sets OFF
AREA TITLE	ON / OFF	If this option is enabled, the area title displays when the camera moves.
	NOTE: The DOME OSD DISPLAY must be enabled.	
PRESET TITLE	CONSTANT / OFF / 3, 30, 60,120,180 seconds	
	Set the preset title display time.	
FOCUSE EXPOSURE	ON / OFF	ON: FOCUS and EXPOSURE displays. (AF AE)
OSD POSITION SETUP	Select the OSD option with **Joystick** up and down and press **CTRL** and adjust the position by **Joystick**.	



- **VIEW ANGLE SETUP**



FLIP OFF, 90°, 100°, 110°, 120°, AUTO **[type EDC-3182 (Art. No. 74169), EDC-3262 (Art. No. 74170) and EDC-3362 (Art. No. 74161)]**

OFF: The dome camera moves until 90° vertically.

90°, 100°, 110°, 120°: Allows the image to flip digitally when the camera moves over the setting angle vertically.

AUTO: When the camera reaches the floor directly above the moving object, it will stop. At that time, release the **Joystick** handle instantly and pull it down again to run the auto-flip function. When you use the panning range, we recommend using the flip mode to AUTO.

TILT OVER ANGLE This option is used to set the limit of the horizontal view angle so that the trim ring or ceiling does not obstruct the horizontal image when zooming out (wide angle).

ON: In some installations it is desirable for the dome camera to be able to see above the horizon. When this option is chosen, the dome will tilt up over the horizon (About -10 degrees). When the lens is zoomed out, you can see the ceiling line. But when the lens is zoomed in, the viewing angle is narrower, and the ceiling line disappears.

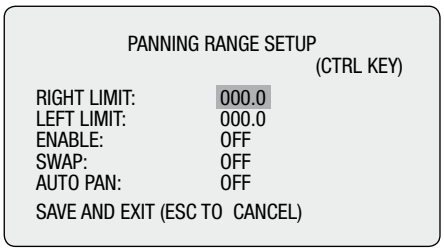
Without Bubble: The tilt range of the camera is limited to see the horizon so the picture shows part of the ceiling line.

With Bubble: The tilt range of the camera is limited to see below the horizon (10 degrees).

Over Angle is not sufficient enough to avoid ceiling obstructions, please adjust Origin Offset of tilt angle as described below.

PANNING RANGE

When the dome camera is installed near a wall, panning range can be limited by user.



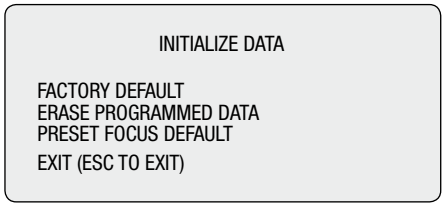
1. Place the dome camera under 90 degree vertically.
2. Set the right limit by pushing the **Joystick** to the right.
3. Set the left limit by pushing the **Joystick** to the left.
4. Set ENABLE to ON to use.

To exchange the right and the left limit, set SWAP to ON.

To apply limits on the auto pan (endless panning), set AUTO PAN to ON.

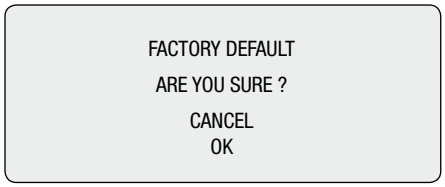
NOTE: When you use the panning range, we recommend using the flip mode to AUTO. When the flip mode is 90°, 100°, 110° or 120° and you moves over 90° vertically, the panning range operates in opposite side.

- **INITIALIZE DATA**



FACTORY DEFAULT

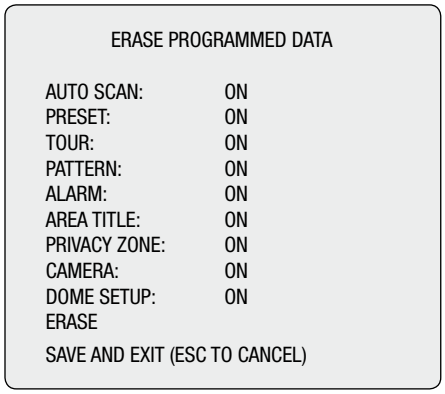
Select the Factory Default to initialize the Data.



ERASE PROGRAMMED DATA

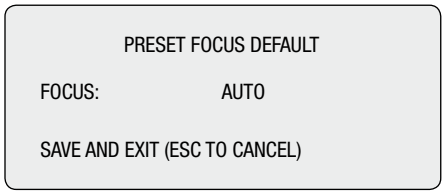
Erase all stored data from the Flash-ROM of the selected dome camera. You will be asked to enter ON or OFF. If you desire to erase all data then select the Erase Run, otherwise press the **ESC** key to exit without erasing. The erased data includes all stored data (auto scan, presets, and tours….) except origin offset.

The offset value is still valid after all data is erased. The offset value can be zero with default set of Offset origin menu.



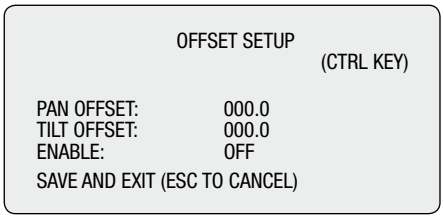
PRESET FOCUS DEFAULT

This menu set the default mode of the focus when you save the preset.



FOCUS AUTO / MANUAL / ONE PUSH

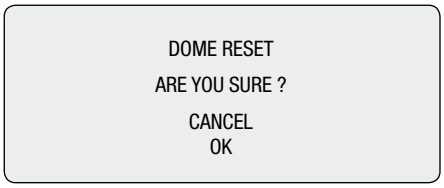
- **ORIGIN OFFSET**



This feature is useful to align a new dome camera exactly the same as the previously installed dome camera.

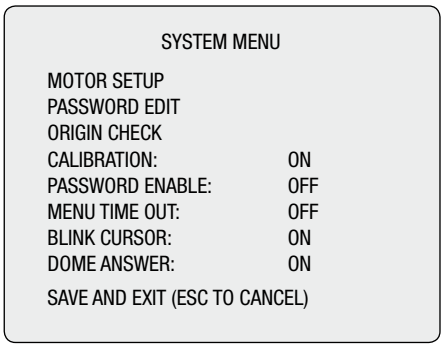
Dome camera's origin set and all data initialize option do not override offset values. Only the default set option in this menu will set the offset value to zero. This can be used to avoid ceiling obstructions.

- **DOME RESET**



This feature is used to re-calibrate the orientation of a selected dome camera. Origin offset value is not affected by this function.
(Offset is still valid after origin set)

- **SYSTEM MENU**

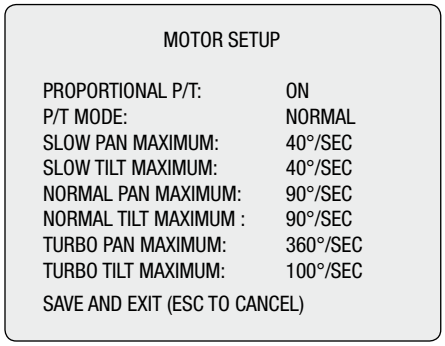


CALIBRATION	ON (Auto origin check) / OFF
PASSWORD ENABLE	ON (requires the password to enter menu) / OFF
MENU TIME OUT	ON (5 minutes) / OFF (always menu display)
BLINK CURSOR	ON / OFF (no blinking cursor)
DOME ANSWER	ON / OFF (no acknowledge command from the dome) This option is helpful to escape the collision of the command using some DVR.

MOTOR SETUP

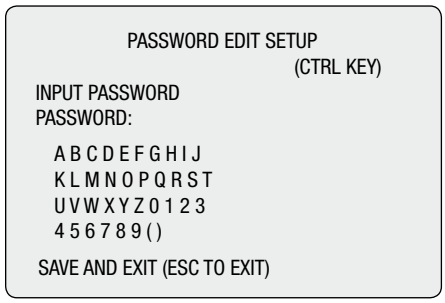
Motor Setup menu provides the pan and tilt speed of a camera. User can set the desired speed with twist the **Joystick** left or right. During operation, pressing **153** + **ON** will change the speed to the SLOW mode and pressing **153** + **OFF** will change the speed to the Normal mode.

Holding and pressing **CTRL** and moving the joystick will operate with the TURBO speed mode.



PROPORTIONAL P/T	ON / OFF
P/T MODE	SLOW / NORMAL / TURBO
SLOW PAN MAXIMUM	19˚- 90˚/second
SLOW TILT MAXIMUM	19˚- 90˚/second
NORMAL PAN MAXIMUM	40˚- 360˚/second
NORMAL TILT MAXIMUM	40˚- 200˚/second
TURBO PAN MAXIMUM	200˚- 380˚/second
TURBO TILT MAXIMUM	90˚- 300˚/second

PASSWORD EDIT


PASSWORD EDIT SETUP
(CTRL KEY)
INPUT PASSWORD
PASSWORD:
A B C D E F G H I J
K L M N O P Q R S T
U V W X Y Z 0 1 2 3
4 5 6 7 8 9 ( )
SAVE AND EXIT (ESC TO EXIT)

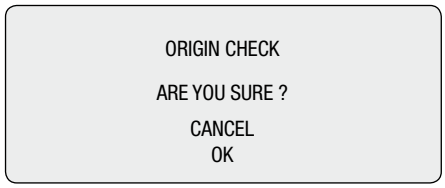
You can change the password with 6-digit character in this menu.

The default password is **555555**.

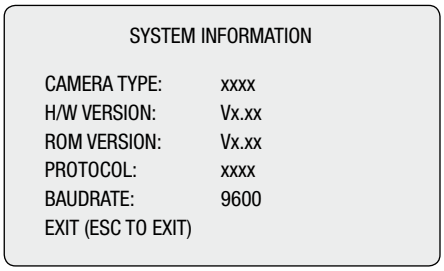
When the password enable is on, the input password window displays to enter the menu. At this time, move the cursor to the desired character by the joystick and press **CTRL** or **IRIS OPEN**.

ORIGIN CHECK

When you find the wrong position of the dome during operation, execute this origin check and the dome camera will arrange the right position after the origin check operation. Pressing **151** + **ON** will execute the origin check.



- **SYSTEM INFORMATION**

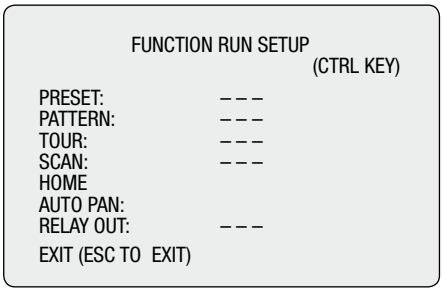


The system information provides essential information about the dome camera if service is required. When you view this screen, you can determine the camera type, ROM version.

The information on this screen cannot be modified.

3.16 Function Run

This Function Run menu allows you to execute the function when you use a keyboard or a DVR without the function keys (PRESET, PATTERN, TOUR and SCAN).



1. Select the desired Function by pushing **Joystick** Up or Down.
2. Select the number by twist the **Joystick** in PRESET, PATTERN, TOUR and SCAN.
3. Press **CTRL** or **IRIS OPEN** to execute.

NOTE: To execute the function, you should store the function (PRESET, PATTERN, TOUR, and SCAN) first.

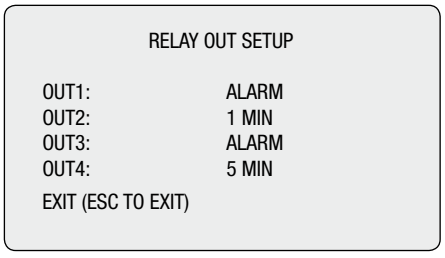
- **HOME**

  Select the HOME option and press **CTRL** key. Then dome camera goes to the default position to which the dome camera returns after an assigned period of inactivity passes. The default position may be a Preset, Tour, Pattern or no action.
- **AUTO PAN**

  You can execute the endless auto pan which is to turn one direction continuously by select the Auto Pan.
- **RELAY OUT**

  This function can operate only when the relay output setup has the time in the alarm menu.

  Example:

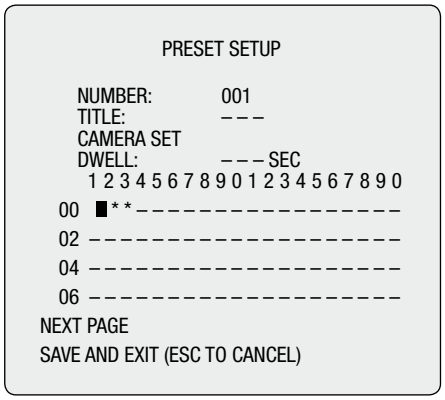


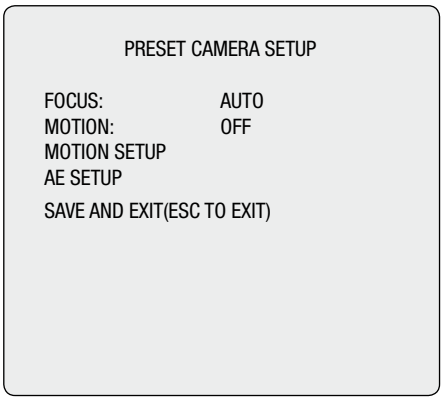
You can select OUT2 or OUT4 and press **CTRL** or **IRIS OPEN** then that relay operates during the setting time only.

3.17 Motion Setup
(Type EDC-3182, 18x, Art. No. 74169, EDC-3262, 26x, Art. No. 74170 and EDC-3362, 36x, Art. No. 74161)

The motion detection function is available in the preset mode only. After you set the motion in any preset, when you call the preset with the motion, the motion detection operates.

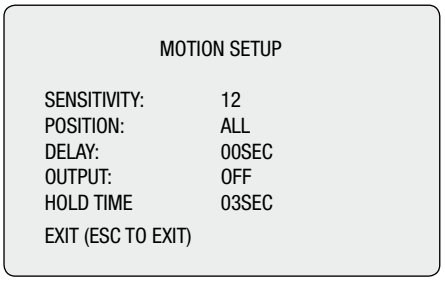
In the preset setup, you can set the motion setup as below.


PRESET SETUP
NUMBER: 001
TITLE: – – –
CAMERA SET
DWELL: – – – SEC
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0
00 ■**– – – – – – – – – – – – – – – – – –
02 –
04 –
06 –
NEXT PAGE
SAVE AND EXIT (ESC TO CANCEL)



To enable the motion on the preset, set MOTION to **ON**.

To enter the MOTION SETUP, push the **Joystick** to right on the MOTION SETUP.



SENSITIVITY	1-15	
POSITION	ALL, CENTER (the center box displays): motion detection area.	
DELAY	00-05SEC:	The delay time is used to make adjustments for scenes that have sudden changes such as lights and shadows created by headlights of nearby traffic. The motion action occurs only when the motion keeps continuously during the delay time.
OUTPUT	OFF, OUT1, OUT2, OUT3, OUT4: relay output	
HOLD TIME	03-99SEC:	The hold time starts to count after the motion detects.

When a motion occurs, the dome activates the relay output, displays the message of „MOTION” on the screen, and sends the command of „ALARM 8” to the keyboard.

3.18 Motion Setup (Type EDC-3351, 35x, Art. No. 74159)

The motion detection function is available in the preset mode only. After you set the motion in any preset, when you call the preset with the motion, the motion detection operates.

In the preset setup, you can set the motion setup as below.

```
PRESET SETUP

NUMBER:          001
TITLE:           – – –
CAMERA SET
DWELL:           – – – SEC
 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0
00 ■**– – – – – – – – – – – – – – – – –
02 – – – – – – – – – – – – – – – – – – –
04 – – – – – – – – – – – – – – – – – – –
06 – – – – – – – – – – – – – – – – – – –
NEXT PAGE
SAVE AND EXIT (ESC TO CANCEL)
```

```
PRESET CAMERA SETUP

FOCUS:           AUTO
MOTION:          OFF
MOTION SETUP
AE SETUP
SAVE AND EXIT(ESC TO EXIT)
```

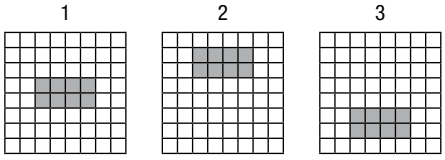
To enable the motion on the preset, set MOTION to **ON**.

To enter the MOTION SETUP, push the **Joystick** to right on the MOTION SETUP.

```
MOTION SETUP

SENSITIVITY:     05
POSITION:        01
DELAY:           00SEC
OUTPUT:          OFF
HOLD TIME        03SEC
EXIT (ESC TO EXIT)
```

SENSITIVITY 1-5

POSITION Motion detection area (1-3)



DELAY 00-05SEC: The delay time is used to make adjustments for scenes that have sudden changes such as lights and shadows created by headlights of nearby traffic. The motion action occurs only when the motion keeps continuously during the delay time.

OUTPUT OFF, OUT1, OUT2, OUT3, OUT4: relay output

HOLD TIME 03-99SEC: The hold time starts to count after the motion detects.

When a motion occurs, the dome activates the relay output, displays the message of „MOTION" on the screen, and sends the command of „ALARM 8" to the keyboard.

NOTE: When you set the motion to ON, the camera switches to the manual focus and the AE mode in the AE setup and the image stabilization, WDR, and the auto night shot function will be disabled.

4. Troubleshooting

If problems occur, verify the installation of the camera with the instructions in this manual and with other operating equipment. Isolate the problem to the specific piece of equipment in the system and refer to the equipment manual for further information.

Problem	**Possible Solution**
No video	Verify that power is connected to all pieces of equipment in the system. Verify that the power switches are in the ON position. Check the video connections.
Poor video quality	Check that the BNC connectors are inserted properly. Check the voltage level of the dome camera. Check that 8 pin cable is connected to the Keyboard. Check 8 pin cable for Keyboard is proprietary. (Cable for video is shielded.)
Dome cameras lose their positions.	Reset the cameras using the Dome configuration menus. Check that the dome cameras are inserted properly in the base. Check the voltage level of the dome camera.
Camera number does not match the multiplexer number.	Check the camera ID and insert the BNC cable into the proper input of the multiplexer.
Picture is torn when switching	Check Line Lock setting and adjust phase of L/L.

5. Glossary

Alarm Actions	The assigned responses for the dome camera when inputs change from normal to abnormal states. The dome may run a Preset, Pattern, or have no assigned action for each of the four dome inputs. The dome may also send alarm states to the host controller for processing. See also Input and Normal Input State.
Areas	Programmed start and end points of the dome's field of view around its pan axis. Each area is a part of a circular viewing area that extends around the dome. The areas can be different sizes. Up to 16 areas can be programmed for the dome.
Automatic Gain Control (AGC)	Allows for the amplification of the video signal in scenes with minimal ambient light. Many low-light scenes result in picture noise. As gain is increased, the picture noise is also amplified. When AGC is enabled, the value of the gain setting is based on feedback from the camera. When AGC is disabled, the camera uses the value set for the manual gain setting. The trade-off between picture level and noise may be adjusted when AGC is disabled.
On-screen Menu	The text overlay menu system used for setting dome features. The utility is accessed using a keystroke combination. The utility provides settings for camera functions, zoom, alarms, text display, and password protection.
Flip	Allows the dome to automatically turn 180 degrees when the camera tilts to its lower limit and stays in that position for a brief delay. When the dome flips (rotates), the camera starts moving upward as long as the tilt control is kept in the down position. Once the control is released, the tilt control returns to its normal operational mode. The flip feature is useful when you need to track someone who walks directly beneath of the dome and continues on the other side.
Home Position	The default position to which the dome camera returns after an assigned period of inactivity passes. The default position may be a Preset, Tour, Pattern, or No Action.
Input Alarm	A connection point on the dome camera that enables the system to monitor Input Devices. There are four inputs available for the dome camera.
Input Devices	External devices that provide information about the condition of system components that connect to the inputs on the dome camera. Typical input devices include door contacts, motion detectors and smoke detectors.
IR Mode	A feature of the camera that permits manual or automatic switching between colour and IR (black-and-white) operation. When IR mode is active, clearer images may be obtained under low-light conditions.
Line Lock	Allows you to phase lock the video with the AC power line. When line lock is enabled, it prevents vertical video rolling when switching multiple cameras to a single monitor. If text appears slightly tinted on colour monitors, disabling the line lock may prevent this problem.
Name Information	Relates to the display the dome name, the area where the dome is pointing, the name of the preset or pattern that is running, and alarm names. The display of each type of name setting can be enabled or disabled. When the display of camera or area title (name) is enabled, the information appears on the screen continuously. Preset, tour and pattern titles (names) appear only while they are active.
Normal Input State	Describes the expected state of a device connected to one of eight dome camera's inputs. The normal state may be open or closed. When a device is not in its normal input state, an alarm is issued.
North Position	User-definable setting that may correspond to magnetic north or some well-known landmark. Used to approximate the camera dome's pointing direction when Direction Indicators are enabled.
Slow Shutter	Setting used to improve the quality of video obtained in extreme low-light situations. When the Low Shutter setting is enabled, low-light information is collected over multiple fields based on the Shutter Limit setting. As a result, video may appear blurred or choppy in extreme low-light situations. This setting does not effect camera operation in normal lighting situations.
Pattern	A series of pan, tilt, zoom and focus movements from a single programmable dome. Up to 8 patterns may be programmed for the dome camera.
Preset	Programmed video scene, based on a specific pan, tilt, zoom, and focus settings. Up to 240 presets may be programmed for the dome camera.
Privacy Zones	Masked areas of the dome camera's viewing area. These masks prevent operators of the surveillance system from viewing these designated zones. The Privacy Zones move in relation to the dome camera's pan/tilt position. In addition, the apparent size of the Privacy Zone adjusts automatically as the lens zooms in or out. Up to eight Privacy Zones may be established for a dome camera.
Shutter Limit	Setting used to define the maximum exposure time for the Open Shutter setting. The values for the setting range from 1/2 to 1/60. The default setting is 1/4.
Vector Scan	Move from start point to end point including tilt and zoom simultaneously and linearly.
White balance	Adjustments in the colour hue (red and blue) gains for a camera so that true white appears white in the image. It is normally compensated for by the automatic gain control. In some lighting conditions, you may need to manually adjust the red and blue settings for optimal viewing. When Automatic White Balance is enabled, the camera measures the image and automatically adjusts the red and blue settings to balance white. When Automatic White Balance is disabled, the camera uses the values set for the red and blue settings to balance white.

6. Short Cut Key

Short Cut Key	Function		
PRST	Pop up preset setup menu		
TOUR	Pop up Tour setup menu		
PTRN	Pop up Pattern setup menu		
SCAN	Pop up Auto Scan setup menu		
NO.**+ PGM + PRST**	Store the current view at the selected number		
Short Cut Key	**Function**	**Short Cut Key**	**Function**
1 + ON	Turn On Relay 1	**1 + OFF**	Turn Off Relay
2 + ON	Turn On Relay 2	**2 + OFF**	Turn Off Relay
3 + ON	Turn On Relay 3	**3 + OFF**	Turn Off Relay
4 + ON	Turn On Relay 4	**4 + OFF**	Turn Off Relay
7 + ON	Change FOCUS to AUTO	**7 + OFF**	Change FOCUS to manual
8 + ON	Change AE to AUTO	**8 + OFF**	Change AE to manual
9 + ON	Change Night Shot to AUTO		
10 + ON	Night Shot ON (go to the manual mode)	**10 + OFF**	Night Shot OFF (go to the manual mode)
11 + ON	BLC ON (AE auto mode)	**11 + OFF**	BLC OFF (AE auto mode)
12 + ON	Digital Zoom ON (According to digital zoom setting)	**12 + OFF**	Digital Zoom OFF
13 + ON	Dome OSD ON	**13 + OFF**	Dome OSD OFF
14 + ON	Dome Area Title Display ON	**14 + OFF**	Dome Area Title Display OFF
15 + ON	View Direction ON	**15 + OFF**	View Direction OFF
100 + ON	Shutter speed auto		
101 + ON	Shutter speed 1/4 (PAL 1/3) sec		
102 + ON	Shutter speed 1/2 sec		
103 + ON	Shutter speed 1 sec		
104 + ON	WDR ON	**104 + OFF**	WDR OFF
105 + ON	Image Stabilizer ON	**105 + OFF**	Image Stabilizer OFF
150 + ON	Image Flip ON	**150 + OFF**	Image Flip OFF
151 + ON	Origin Check		
152 + ON	Place the camera in the 0° area horizontally.		
153 + ON	Go to the slow speed mode	**153 + OFF**	Go to the normal speed mode
154 + ON	Display System Information		
155 + ON	Flip the camera in the 180° area horizontally.		
250 + ON	Set the dome ID up to 3999		
888 + ENTER	Night Shot ON (in the global mode only)		
999 + ENTER	Night Shot OFF (in the global mode only)		

Some function may not operate according to the model.

7. Specifications

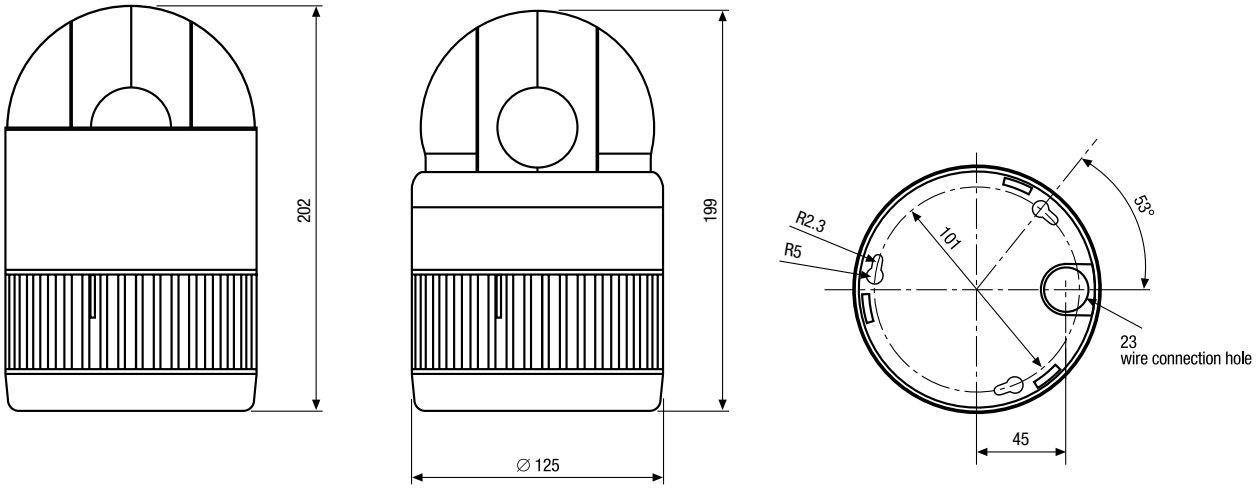
Type	EDC-3182	EDC-3262	EDC-3351	EDC-3362
Art. No.	**74169**	**74170**	**74159**	**74161**
Series	eneo Fastrax III			
Video standard	CCIR/PAL			
System	Day & night			
Sensor size	1/4”			
Imager	CCD, Sony ExView HAD Interline Transfer			
Synchronization	Internal/AC line lock, phase adjustment via remote control			
Signal-to-noise ratio	50dB			
Sensitivity (at 50% video signal)	0,3 Lux, at F1.2, 0.7Lux at F1.4, 0.015Lux at 1/3sec. shutter speed, 0.007Lux at 1/3sek. shutter speed and IRCF Off (B&W)	0.2Lux, at F1.2, 0.35Lux at F1.6, 0.2Lux at 1/3sec. shutter speed (F1.6) 0.02Lux at 1/3sec. shutter speed (colour), 0.01Lux at 1/3sec. shutter speed (B&W)	0.6Lux (colour), 0.3Lux (B&W). Videor measurement result at F1.2, DSS Off	0.3Lux (colour), 0.13Lux (B&W). Videor measurement result at F1.2, DSS Off
Horizontal resolution	540 TVL			
Speed (manual control)	380 °/sec.			
Speed range at manual control (pan)	0.1° ~380°/sec. (proportional to zoom)			
Speed range at manual control (tilt)	0.1° ~200°/sec. (proportional to zoom)			
Preset speed	380 °/sec.			
Rotation range	360°			
Tilt range	-10° ~ +190° (Digital Flip)	180° (Digital Flip)		
Preset positioning	240 presets with with camera status (12-character title display)			
Freeze function	The image will be frozen during calling preset.			
Backlash	0.2°			
Patterns	8 patterns up to 500sec.			
Tours	Up to 8 programmable guard tours, consisting of 42 presets each and up to 12 character title display			
Autoscan	16 User programmable auto scans with 13 selectable speeds and 12 character title display			
Proportional pan and tilt	Continually decreases pan and tilt speeds in proportion to depth of zoom			
Auto flip function	Rotates dome camera’s picture by 180° at bottom of tilt travel (Digital Flip)			
Programmable park position	Included			
Privacy Zone masking	8 privacy zone masking (2 methods selectable: Block / video OFF), up to 12 character labels each			
Digital signal processing (DSP)	DSP-3R		DSP-7	DSP-3R
Automatic gain control (AGC)	Automatic (On/Off switchable)			
Shutter Modes	–	High and Low Speed shutter		
Shutter speed (AES/MES)	Automatic/manual: 1/3 ~1/10,000sec. (PAL)		Automatic/manual: 1/50 ~ 1/30,000sec.	Automatic/manual: 1/3 ~1/10,000sec. (PAL)
Integration rate	yes			
Low Speed Shutter (DSS)	–		2~32 fps.	–
Digital Noise Reduction (DNR)	no			
White balance	Modes: Manual, Automatic, Indoor, Outdoor, ATW			
Backlight compensation	BLC		WDR, BLC	
Switchable IR cut filter	yes			
Video outputs (type)	CVBS			
Video outputs	1Vp-p, (C)VBS, 75ohms, BNC			
Lens mount	Integrated lens			
Lens type	Zoom			

Type	EDC-3182	EDC-3262	EDC-3351	EDC-3362
Art. No.	**74169**	**74170**	**74159**	**74161**
Lens	F1.4 ~F75/4.1 ~73.8mm (18x optical, 12x digital zoom)	F1.6 ~ F80/3.5 ~ 91mm (26x optical, 12x digital zoom)	F1.4 ~ F170/3.4 ~ 119mm (35x optical, 12x digital zoom)	F1.6 ~ F75/3.4 ~ 122.4mm (36x optical, 12x digital zoom)
Aspherical technology	yes			
Focal length	4,1 mm - 73,8 mm	3.5-91mm	3.4-119mm	3.4-122.4mm
Horizontal angle of view	48° - 2,8°	54.2-2.2°	55.8°-1.7°	57.8-1.7°
Digital Zoom	2x ~12x	12x		
Focus control	Automatic with manual override			
Iris control	Auto iris, Manual override			
MOD (Minimum object distance)	1,0 m			
Filter screw size	Not available			
Alarm inputs	8, selectable between NO and NC			
Alarm outputs	4x Relay contacts, programmable as NO/NC contact, 12VDC/1.0A resistive			
Alarm processing	Programmable alarm action with selectable priority levels			
Motion Detection Function	no		In Preset mode only	
Menu driven set-up	On/Off switchable			
Menu languages	English, German, French, Spanish, Portuguese, Italian, Polish			
Text display	16 character labels		12 character labels	16 character labels
Operation protection	Available			Password protected
Backup	Non-volatile back box memory stores all camera and site-specific dome settings			
Adresses	Up to 999 Dome ID's (3999 by software setting)			
Keyboard control	Direct mode control with Eneo EDC-KBD(M) keyboard series, or in conjunction with the eneo DVR series DLR, DTR and DPR			
Remote control	Camera remote settings via keyboard			
Serial interfaces	RS-422, RS-485, 9600Baud, 999 camera ID adresses selectable. Besides the keyboard control via the eneo EDC-KBD(M) series, the control via matrix switchers and keyboards from Pelco (D+P protocol), Ernitec, Philips G3, Sensormatic RS-422, (back channel via RS-422 is not activated), Vicon and Dynacolor is available			
Temperature range (Operation)	0 ~+50°C			
Heater	no			
Protection rating	IP40			
Supply voltage	24VAC, (18 ~30VAC), 50/60Hz			
Power consumption	20watts			
Vandalism resistant	no			
Bubble	4.9" (125mm), clear acrylic plastic			
Colour (bubble)	Clear			
Mounting	Surface mount, Housing assy			
Housing	Black plastic for indoor drop-ceiling mount up to 0°C			
Weight	Approx. 1.2kg			
Parts supplied	Clear bubble			
Certificates	CE			
Special feature	Auto calibration			

Accessories

Art. No.	Type	Description
70449	**NE-128**	Voltage supply unit 230V/24VAC-5A, IP66
70527	**NE-132/AC24V**	Power Supply Unit 230VAC/24VAC (1.0A)
74136	**EDC-OPS-2/24V**	Pendant Mount Outdoor Dome Housing with Sunshield, Tinted Bubble 6.5”, 24VAC
74130	**EDC-OPC-2/24V**	Pendant Mount Outdoor Dome Housing, Sun Shield, Clear Bubble 6.5”, 24VAC
74134	**EDC-IPS-2/24V**	Pendant Mount Indoor Dome Housing with Tinted Bubble 6.5”, 24VAC
74135	**EDC-IPC-2/24V**	Pendant Mount Indoor Dome Housing with Clear Bubble 6.5”, 24VAC
74139	**EDC-IDFHCB**	Flush Mount Dome Closed Housing, Black Trimring, Clear Bubble 6.8”
74057	**EDC-IDF**	Flush Mount Dome Housing, Smoked Bubble 4.9”
74088	**EDC-KBD1**	System Keyboard with 3-axis Joystick, 12VDC/230VAC
74092	**EDC-KBDM-3**	System Keyboard with Joystick, 5” Monitor 12VDC/230VAC, Fastrax Protocol
74149	**KBD-2**	System Keyboard with 3-Axis Joystick and Jog Shuttle, 12VDC/230VAC
74094	**EDC-COAX**	Coax Telemetry Board for VPT-41/42, VPT- 501/601, EDC/EDMC Series assembled
70457	**AK-3**	Camera Connection box, 230VAC Input 24VAC-100W, 12VDC-1A Output
74089	**EDC-CR1**	Converter RS-232/RS-485, Repeater RS-485
74095	**EDC-PBP**	Protocol Converter BiPhase to RS-422, RS-485 for EDC Dome Cameras, 12VDC
74124	**FASTRAX_CONFIG**	Configuration Software for Eneo Fastrax, Minitrax Dome Cameras and VKC-1416

8. Dimensional Drawings



Dimensions: mm

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